THE VETERINARY RECORD

A Weekly Journal for the Profession.

Edited by WILLIAM HUNTING, F.R.C.V.S.

No. 799 OCTOBER 31, 1903. VOL. XVI

GLANDERS.

Since Lord Onslow became Minister of Agriculture two deputations have waited upon him asking for improved regulations to stay the spread of glanders. The deputations were from London and Glasgow—the two chief centres of the disease—and were sent by the Local Authority of each place. No report of the interviews has been published, but we hear that verbal assent was given by Lord Onslow to the statements made by both deputations. It is acknowledged by all concerned that the existing regulations are useless, and it is desired by nearly all that the recommendations made by the Departmental Committee in 1899 should be accepted and acted upon.

Since the Committee reported, our loss of horses from this preventable disease has gone on year after year unchecked. The figures are:

1899	736	half year
1900	1858	whole year
1901	2370	,,
1902	2040	,,
1903	2113	to Oct. 24th.
	9117	

The loss of nearly 10,000 horses since the time when the Board of Agriculture had clear knowledge of the cause, and necessary methods of prevention, is an exhibition of departmental incapacity which even the War Office could hardly equal. It is true that during these five years of neglect we have had three different Presidents of the Board of Agriculture—each of whom has had to learn his business. This is no excuse. There is a large permanent staff who might surely have long since prepared and submitted a new scheme in accordance with the desires of the Local Authorities of greatest experience, and on a level with the knowledge of modern veterinary science.

What has been recommended by a Departmental Committee includes no great difficulties. Some large private firms have cleared their studs of disease by adopting those suggestions, but they are unprotected from re-infection through other stables in which nothing has been done.

The existing regulations are little more than a registration of deaths. As soon as a diseased animal has been killed and removed the law orders the veterinary inspector off the infected premises, and the whole of the "in-contact" horses can be worked, moved or sold at the will of the owner.

The Board harp upon the solitary fact that the horse-owner makes no special appeal to them. The horse-owner is not a class. All sorts of people own horses, but none attends to the ills of the horse. There are no societies or collective bodies to take action as there are with oxen, sheep, and pigs. The horse-owners in towns are an isolated, disconnected lot who possess no common interests, and so the Board ignore the national loss of 10,000 horses and give no attention to the deaths of men who are infected by the diseased horses. If horse-owners were combined, like publicans, no difficulties would stop the Board of Agriculture from doing its duty.

REPORT OF THE COMMITTEE ON THE A.V.D.

We have much pleasure in offering our readers a few extracts from this report. They show that the Committee were most reasonable, and that the veterinary members were most tactful in stating their case and not over-stating it.

The Members of the Committee were:—

The Earl of HARDWICKE, Chairman,
Parliamentary Under Secretary of State.
Major-General A. S. WYNNE, C.B., D.A.G.
Mr. A. HIGGINS, Deputy Accountant-General.
Vet.-Colonel H. THOMSON, C.B., D.G.A.V.D.
Lt.-Col. P. S. MARLING, V.C., C.B. 18th Hussars.
Major R. M. RODWELL, R.H.A.
Professor OWEN WILLIAMS, P.R.C.V.S.
Mr. J. F. SIMPSON, F.R.C.V.S., J.P.
Mr. C. F. WATHERSTON, *Secretary.*

Secretary of State,

1. The dissatisfaction of the Army Veterinary Department and the profession generally with the conditions of service in the department has for some time been of a serious character.

2. Since March, 1902, a considerable measure of improvement has been effected; the periods required for promotion to the ranks of Captain and Major have been shortened, the rates of retired pay in many cases have been raised, the period for which full pay for sick leave was allowed has been extended, and the grants of free passages to Officers' wives and families have been increased.

3. These concessions, however, failed to satisfy the profession, and fresh statements of grievances were put forward by the Royal College, and by the Director-General of the Army Veterinary Department.

The chief points complained of were—
The Compound title.
Insufficiency of pay and pension.
Want of a trained subordinate staff.

We have considered these grievances as shown in the papers referred to us for consideration, and our recommendations are recorded below.

4. We have not thought it necessary to call any witnesses to give evidence before us, as the Director-General of the Army Veterinary Department and two civilian veterinary surgeons were amongst our number. These gentlemen were able to furnish the other members of the Committee with sufficient information as to the various points raised, and their experience we considered to be a sufficient guarantee that the tale of grievances was complete.

5. In considering the various improvements in the conditions of service of the department which we have decided to recommend, we have kept clearly

before us two objects; first, to secure a sufficient number of candidates of the right class for the department; second, to maintain the efficiency of the officers when they have once entered the service.

6. We wish to direct the attention of the Secretary of State to the fact that the department is at present seriously below its normal establishment, and to state that, in our opinion, without some additional inducement to join, a sufficient number of candidates of the right class will not be forthcoming. This points to the necessity for an early decision.

7. Our proposals throughout are based on the establishment as shown in the 1902-03 Estimates, and we have not thought it within our province to consider any increases in that establishment which may be necessitated by a continuance of the garrison in South Africa or by other causes; our proposals do not in themselves involve any increase in establishment, but the expense of introducing them will be increased by an addition to the number of officers in the department.

8. The first cause for complaint put forward both by the department and by the profession generally is the refusal to grant the combatant title to veterinary officers. We consider the complaint technically well founded, and we strongly advise that the title be granted, but we wish to state that this opinion is based solely on the fact that the title has been granted to other non-combatant branches of the Army, and especially to medical officers. In these circumstances we consider that officers of the Veterinary Department are under a grave disability, both in the Army and generally in their social relations, and that the adverse impression made upon the country at large, owing to the maintenance of the compound title, is sufficient to deter men of the right class from offering themselves as candidates for service in the department.

9. It has been urged as a reason for refusing the title, that the veterinary officers have no men under their own command, but this contention is hardly applicable to the officers serving in India, who have the men of the Indian subordinate Veterinary Staff entirely under their orders; and the scheme for a permanent subordinate staff, which we recommend below, will, if adopted, still further dispose of the objection to granting the combatant title.

10. We consider that the next in order of importance of the grievances put forward is the demand for a permanent subordinate staff.

11. Under the present system the Veterinary Department has to depend solely for its subordinates upon men lent and withdrawn by regiments at the discretion of the Commanding Officer. We consider this arrangement open to considerable objection.

12. Further, the regimental hospitals are found to be insufficient in time of war, and great economy in men and horses, time and money, is found to be effected by the introduction of field veterinary hospitals, in which the more serious cases can be dealt with. These hospitals, organised on the same basis as those previously found to have worked satisfactorily in India, have been very well reported upon in South Africa.

13. The Committee, therefore, recommend—

That central veterinary hospitals be introduced at the head-quarters of each of the first four Army Corps; these hospitals to be manned by a specially enlisted subordinate veterinary staff; to be provided with a hospital building, and also with certain equipment (veterinary chests, tents, etc.), which would be required on mobilisation, and a storehouse in which to store them. The system to be extended to other Army-Corps if thought desirable.

21. The scheme will, we consider, be most advantageous in peace time, not only in providing for the necessities of sick horses, but also in training Veterinary Officers. The real reason for the existence of the central hospital, however, is as a basis for a field hospital in time of war; and we have accordingly recommended one hospital only for each Army-Corps, irrespective of the number of mounted troops concentrated at the Army-Corps head-quarters.

23. As regards the conditions of pay, promotion, and pension, we think that, although comparison between the Veterinary Department and the Royal Army Medical Corps in these respects is natural, the comparison must not be pushed too far.

At the same time we do not consider that the present rates of pay in the Veterinary Department are sufficient to attract men of first class ability.

24. The present dearth of candidates is no doubt partly attributable to the fact that the Royal College of Veterinary Surgeons have recently lengthened the course and generally raised the standard of the examinations required for qualification, and have thus, by increasing the expense of entering the profession, diminished the supply; but we consider that the main cause of this dearth lies in the widespread impression that the social status of the Veterinary Officer in the Army is not only inferior to that of Officers in other branches of the Service, but also to that of the civilian veterinary surgeon.

The adoption of the recommendations made above will, we expect, do much to remove this impression, but we consider that it will also be necessary to make some improvements in the pay and rate of promotion.

41. Though we do not recommend specialist pay, we think that more encouragement should he given than is done at present, to Officers desiring to pursue special studies subsidiary to their profession, though not necessarily involved in its normal practice.

To this end we consider that some arrangement should be made to provide a substitute when an Officer goes on leave for purposes of professional study for a period not exceeding 2 months.

46. We have had before us a proposal drawn up by Professor W. Owen Williams, President of the Royal College of Veterinary Surgeons, for the establishment of a reserve of civilian veterinary surgeons, which could be drawn upon in time of war, and could also furnish assistance in the matter of remounts. We have not considered the details of this proposal, as it hardly appeared to be within our terms of reference, and as we had no member of the Quarter-Master-General's Department among our number.

We think, however, that some definite scheme for the formation of a Reserve of Veterinary Surwill be found necessary, and we therefore recom-

mend to the favourable notice of the Secretary of State our opinion that Professor Owen William's proposals should be considered by a small committee appointed for that purpose.

8th April, 1903.

ABSTRACTS FROM FOREIGN JOURNALS.

THE PROPAGATION, INCREASE AND DEVELOPMENT OF TRYPANOSOMES IN THE BLOOD OF ANIMALS ILL OF SURRA.—By A. BRAUER, Government Veterinary Surgeon.

The accounts of all authors who have hitherto written on surra agree pretty generally on one point, and that is on the method of increase of trypanosomes in the blood of animals ill of surra. Similar structures and processes have been noticed by all observers which in reality do not exist. One exception may be made in favour of the Americans Salmon and Stiles, as is evident from the emergency report on surra from the Bureau of animal industry.

I willingly grant that the increase of surra parasites in the animal body is not easy to follow, hence the hitherto accepted belief in their increase by long-stalking is only a makeshift, and excusable. That this dogma has been held fast until now is only due to a kind of piety towards those who have set up this dogma. I have sat at the microscope for hours at a time and noticed the parasite in the hanging drops. I have examined hundreds of preparations of blood taken fresh from different domestic animals in every stage of the illness, yet I have never succeeded in establishing a long-stalking of the parasites that was not free from objection. But I have more frequently noticed in the presence of extremely numerous parasites that accidental forms arise which could be mistaken for long-stalking. These constellations of trypanosomes furnish an acceptable proof for the increase of trypanosomes by long-stalking.

In the "Emergency Report on Surra" Salmon and Stiles write "Forms of (trypanosomes) which apparently arise from two narrow parasites in close proximity with free flagellæ have been noticed in a few cases. After long observation of these forms in the living state we have no ground for the belief that these occur in a state of long-stalking." The correct solution of the question has been more nearly approached by Veterinary-Surgeon P. Schat, of Java. He has seen different forms in the blood of animals ill of surra which he does not quite understand how to explain, but may be fully recognised as belonging to the stages of development of trypanosomes.

According to my examinations the trypanosomes form spores. It has frequently happened with me that in the blood of one and the same animal now trypanosomes with a nucleus and centrosoma, now with a nucleus only, and now without either occur. The nucleus and centrosoma stain violet to lightish red with older borax methylene blue solution. I favour the colouring of blood preparations with this solution on account of its simplicity, as Romanowsky does.

Most frequently I have encountered parasites without nucleus and centrosoma. In shape and size the former differ rather considerably from one another. Herein my observations coincide with those of Salmon and Stiles. Soon the trypanosomes become stretched out to some length and point; soon the hind end gets more blunt and their form more compact, whilst other individual trypanosomes are quite short and thick, and only have a moderately long flagellum. That one is only dealing with a form of the parasite here is proved to me by the prevalence at the same time of the one shape with only relatively few transition forms. This is indicated by the occurrence of a more or less large vacuole at the blunt end. If I found on first looking at a preparation a parasite with a vacuole, then I could with certainty reckon that by far the greater portion of the same was furnished with vacuoles.

G. M.

(To be continued.)

THE CENTRAL VETERINARY MEDICAL SOCIETY.

The Annual General Meeting was held at the Royal College of Veterinary Surgeons, 10 Red Lion Square, W.C., on Thursday, October 1st, 1903, Mr. W. Perryman, President, in the chair. There were present:—Messrs. W. Pritchard, J. S. Hurndall, S. H. Slocock, S. Villar, J. A. Nunn, R. Butler, A. E. Bayley, R. Porch, C. W. W. Brown, F. O. L. Walpole, H. A. MacCormack, Guy Sutton, A. L. Butters, W. R. Clarke, J. Rowe, P. W. D. Smith, and E. Lionel Stroud. Hon. Sec.

On the motion of Captain Butler, seconded by Mr. Bayley, the minutes of the last annual general meeting were taken as read and confirmed.

CORRESPONDENCE.

The SECRETARY read a letter from the Veterinary Medical Association of Ireland *re* the recent case in Ireland in connection with serving on juries. Also a letter from the Transvaal Veterinary Medical Association in response to our letter announcing that a similar resolution to ours had been sent to the War Office.

The SECRETARY also read a letter from Mr. R. Paine resigning his membership of the Society, having gone to S. Africa.

On the motion of Mr. Villar, seconded by Mr. MacCormack, Mr. Paine's resignation was accepted with regret.

ELECTION OF FELLOW.

Mr. R. P. THOMAS, M.R.C.V.S., of Brecon, S. Wales, was balloted for, and unanimously elected a Fellow of the Society.

ANNUAL REPORT AND BALANCE SHEET.

The SECRETARY read the Annual Report.

Mr. President and Gentlemen,—In presenting the Annual Report the Council have much pleasure in announcing that the Session 1902-3 has been a most successful one. The Society still continues to increase in numbers, fourteen new Fellows having been elected during the past twelve months, whilst six have resigned.

Ten Ordinary and three Council meetings have been held, with an average attendance of twenty-eight members at each meeting.

The annual meeting was held in October, when Mr. Perryman was unanimously elected President. Messrs. A. Rogerson, J. Rowe, R. Porch, and Prof. W. Pritchard were elected Vice-Presidents; and Prof. Macqueen, Col.

Nunn, Col. Duck, Messrs. W. Hunting, S. Villar, F. G. Samson, H. A. MacCormack, S. H. Slocock, W. Reekie, L. Savournin, W. L. Harrison, and Prof. Woodruff on the Council. Mr. A. L. Butters was re-elected Hon. Treas., and Mr. E. Lionel Stroud, Hon. Sec. Messrs. W. L. Harrison and W. Roger Clarke were appointed Auditors for the year.

In November the Presidential Address was given by Mr. Perryman, and this was followed by the annual dinner at which 49 sat down.

The following papers have been read during the Session, and the discussions have been thorough and hearty :—

(1) "Spasm of the Diaphragm," by Lieut.-Col. J. A. Nunn.
(2) "Notes on the Use of Oxygen in the Treatment of Respiratory Diseases of the Horse," by Mr. A. L. Butters.
(3.) "Stricture of the Œsophagus," by Professor W. Pritchard.
(4) "Aseptic Veterinary Surgery," by Prof. Hobday.
(5) "A few remarks on Broken Knees," by Mr. C. J. Humphrey.
(6) "The use of Iodine in Veterinary Practice," by Capt. E. E. Martin.

The Council are pleased at the greater number of morbid specimens brought to the meetings, and trust members will continue to bring subjects, as they not only make an interesting addition to the meetings, but materially advance the principles for which this Society was promoted. Ia addition to the papers enumerated above the Society have had under consideration the subject of Glanders, and have forwarded a resolution to the Board of Agriculture on this matter ; and we regret that no more stringent laws have been passed by them. We trust that further action will be taken by the Society during the forthcoming session, to point out to the Board of Agriculture the necessity of stamping-out this scourge, which at the present time is undoubtedly on the increase in London.

With regard to the grievances of our brethren in the Army Veterinary Department, the Society has taken strong action in the matter, and forwarded a resolution to the War Office, and to all the Veterinary Societies. As this is a matter of vital importance to the whole profession, we are of opinion that the matter should not be allowed to drop, but that, until our just demands are granted, we, that is the veterinary profession, should continue to press home our grievances upon the authorities.

The receipts during the year have been £96 2s. 9d. and the expenditure £104 2s. 8d., which includes a further grant of twenty guineas to the Victoria Benevolent Fund. The Council regrets to have to report a deficit on the year's working. This they are of opinion is accounted for by the fact that some members are in arrear for their annual subscription, and some their entrance fee. The Council would earnestly request such gentlemen to send the amount due to the Treasurer without further delay.

The President and Mr. Rowe represented the Society at the Sanitary Congress at Bradford, their report will follow in due course. Mr. Butters who was to have represented the Society at the Public Health Congress at Liverpool was unfortunately taken ill at the last moment and was unable to go, and it was impossible in the short time to find a substitute.

On the motion of Mr. Porch, seconded by Mr. MacCormack, the report and accounts were unanimously adopted.

Messrs. Walpole and Bayley were elected scrutineers of the ballot for the election of officers.

Election of Officers.

Colonel Nunn said he had great pleasure in proposing the election of Mr. Porch as President of the Society for the ensuing year. (Cheers.) Mr. Porch was a very old and active member of the Society, and had contributed several excellent papers to its proceedings. As he was resident in London he was sure he would be able to fulfil the duties of the office, and carry out the work for which the Society was originally established. (Cheers.)

Mr. Villar, in seconding the motion, said that he was quite certain if one went right through the list of Fellows of the Society it would be impossible to find a more suitable gentleman for the position of President than Mr. Porch. (Cheers.)

The resolution having been put and carried with acclamation,

The President said that before vacating the chair in favour of Mr. Porch, he begged to offer the Fellows of the Society his cordial thanks for the support and help they had given him during the past year. The position of President entailed the expenditure of a certain amount of time, and had its responsibilities and anxieties, but he should always look back upon his year of office as one of very great pleasure. In congratulating Mr. Porch upon his appointment, he heartily wished him a successful year, and hoped he would have the support of all the members.

[The Chair was then vacated by Mr. Perryman and taken, amid applause, by Mr. Porch].

The President (Mr. Porch) sincerely thanked the members for the honour they had conferred upon him in electing him to the Presidential chair of the Society. He assured them that it would be through no lack of energy on his part if there was a falling off in the Society during the ensuing year, and that he would do his best to further its interests. (Cheers.)

Vice-Presidents.—The following gentlemen were elected : Lieut.-Col. J. A. Nunn, Mr. W. Perryman, Colonel Thompson, and Prof. W. Pritchard.

Council.—The following twelve gentlemen were elected to constitute, with the officers, the Council of the Society : Messrs. A. Rogerson, Capt. Butler, S. Villar, Prof. Macqueen, H. A. MacCormack, W. Hunting, S. H. Slocock, W. S. Harrison, Profs. Woodruff and Hobday, L. Savournin, and Col. Duck.

Hon. Treasurer.—Mr. W. Perryman, in moving the re-election of Mr. A. L. Butters as hon. treasurer, said that with the exception of the Secretary he had been most in contact with the Treasurer during the past year and could strongly recommend him again to the members. The manner in which he looked after the accounts and worked in the interests of the Society was in itself a sufficient recommendation for his re-appointment.—(Cheers.)

Prof. Pritchard, in seconding the motion, said that in his experience there was no better man than Mr. Butters in the collection of accounts and looking after the money of the Society.

The resolution was carried unanimously.

Mr. A. L. Butters thanked the members for the honour they had conferred upon him in again entrusting him with their confidence. He would endeavour to keep a hold on the accounts, although it was a somewhat difficult task. The claims upon the funds during the last year were exceedingly heavy, as a donation of twenty guineas was given to the Benevolent Society. He had just been discussing with the Secretary whether it would be wise to allow such a large amount to be given away this year.

Hon. Secretary.—Mr. W. Perryman, in moving the re-election of Mr. E. Lionel Stroud as secretary, said he was sure he was expressing the wishes of all the members when he said that they earnestly desired that Mr. Stroud would again serve as Secretary ; they looked upon him as the main spring of the Society. (App.)

Mr. MacCormack formally seconded the motion, which was carried with acclamation.

Mr. E. L. Stroud thanked the members for the honour they had done him in re-electing him Secretary; he would do his best to carry out his duties to the best of his ability, and to further the interests of the Society as much as he possibly could.

Auditors.—On the motion of Mr. Villar, seconded by Prof. Pritchard, Messrs. W. L. Harrison and W. Roger Clark were unanimously re-elected auditors of the Society for the ensuing year.

Dinner Committee.—On the motion of Mr. Perryman, seconded by Mr. Bayley, it was resolved that the Dinner Committee be composed of the President, Treasurer and Secretary, and the three gentlemen who served last year, with the substitution of Mr. Brown in the place of Mr. Porch.

Vote of Thanks to the Retiring President.

Prof. Pritchard, in moving a cordial vote of thanks to the past President, Mr. W. Perryman, said it had been his lot to attend the meetings for many years past, but he did not know that he ever sat under a President where he had been more pleased with the manner in which the business had been conducted. It fell to the President's lot to find material to interest the members of the Society, by inducing members to read contributions and encouraging the discussion, and from his own experience he knew that was no slight work. Mr. Perryman had carried out his duties in a way which he was sure would meet with the appreciation of everyone present, and the members would not be doing credit to themselves if they did not thank their past President for the honour he had done them in presiding over the meeting. (Cheers.)

The resolution having been carried with acclamation,

Mr. W. Perryman, in reply, said he hardly knew how to thank Prof. Pritchard for the kind way in which he had moved the resolution, and the unanimous manner in which the members had carried it. As he had already stated, he looked back with great pleasure to the time during which he occupied the Chair. It certainly had been an anxious time in regard to the essays, and the desire that the meetings should be well attended. No one who had not occupied the Chair could appreciate the difficulty there was in getting gentlemen to volunteer to read papers on suitable subjects. To all those gentlemen who had so kindly come forward during the time he occupied the Chair, and particularly to one or two who came forward at a time of great emergency, he expressed his gratefulness for the help they had given. He also thanked those gentlemen who had brought forward specimens. He thought he could claim that more morbid specimens had been exhibited during the past year than for many previous years; some of the specimens had been most interesting and instructive, and a great help to the members in their daily practice. He appealed to the members on behalf of the new President to volunteer to read papers without quite so much pressure, and hoped they would support Mr. Porch in every possible manner during the coming year. (Applause.)

Votes of thanks having been passed to the Scrutineers for the excellent manner in which they had carried out their duties, and to the President for his conduct in the Chair. the meeting terminated.

Vet.-Lieut.-Colonel Morgan, Inspector-General, Civil Veterinary Department, spends his three months' leave on a shooting trip in Kashmir. He will soon be promoted to the rank of Colonel.

Whilst employed as Inspector-General, Veterinary-Major Brodie-Mills will probably be promoted to the rank of Lieutenant-Colonel, he having already put in requisite period of service for promotion.—*Advocate of India.*

A UNIVERSITY MEDICAL CURRICULUM.

By E. A. Schafer, LL.D., F.R.S.,
Professor of Physiology, University of Edinburgh.

We have reprinted this portion of Professor Schäfer's address as it bears directly upon the question of education now exercising many minds in the veterinary profession.

Gentlemen,—There is no subject which will require more careful consideration in the settlement of the educational details of the new University of which Leeds is to be the centre than that of the choice and arrangement of the curriculum to be required for the degrees in medicine, and I therefore make no apology for introducing this as a subject of the address which I have been honoured by being asked to deliver to you to-day. An exceptional opportunity presents itself: you have, within certain limits, a *tabula rasa*, and it behoves the authorities of the future university to mark it in the manner best calculated to promote the advance of medical science and the efficiency of medical teaching. If, from an experience acquired as a teacher and examiner in various universities during a period of more than a quarter of a century, I can help in the promotion of these objects, by pointing out virtues which may be emulated here, and failings which may be avoided there, I shall at least feel I have done something to assist in the modelling of what will, we all hope, become one of the great centres of learning of the kingdom and empire. But whilst endeavouring to sketch out what subjects should form part of the medical curriculum of a University, and to appraise their relative order and value, I do not propose to place before you an ideal which is unattainable under the circumstances of place and time, and, more important still, of finance in which you find yourselves, although it would be easier to construct an ideal curriculum than to plan one out within the limits of present-day practicability.

It may be premised that every university should endeavour so to arrange its teaching and examinations as to render it possible for all students who have conscientiously followed the teaching, and who have worked steadily during their period of study to obtain the degree which marks a certain standard of efficiency. This is the pass standard, and the medical degree in many universities is restricted to this standard, which, however, varies considerably in different centres. I myself think that it is not only right for a man who has shown himself superior to his fellows in learning to be able to have that superiority recognised by an honours degree, but that the promotion of higher teaching in the university suffers from the absence of such degrees, since, if there is but one standard, and that not a particularly high one, the teachers will be chary of offering and the pupils impatient of receiving knowledge which both know will not be required for an examination. I do not, however, propose to divert the course of your attention along by-paths which lead in the direction of special or honours degrees, which, when all is said and done, must at best concern only a small proportion of undergraduates, but will try and confine it to the manner in which the requirements for a pass only should be met.

The Standard of a University Degree in Medicine.

In the first place I would insist that a university degree in medicine should invariably—although in some instances it is not so—be a sign of higher attainments than a mere qualification to practise. I do not think there is any fear that the new University which is to be set up here will depart from this principle, or is in the least likely to go back upon the traditions of the Victoria University of which it is one of the offspring.

I will assume that the medical degrees will, as they should do, confer a real distinction and indicate a fair amount of scholarship. To attain this or any other university degrees, it is necessary to pass through certain stages of prior education, and to produce evidence, by examinations or otherwise, that in certain stages a certain proficiency has been acquired. Of these stages the elementary and secondary are common to most degrees, and the subjects embraced by them are regarded as essential elements of a general education. How far this may be true for all of them, I am not now prepared to discuss at length. We still follow in some respects the traditions handed down to us from the Middle Ages regarding the education of our boys. It is no longer considered essential that a Member of Parliament should introduce from time to time a quotation from Virgil or Ovid into his speeches, and probably only a minority of the members are now able to understand such a quotation were it forthcoming. But a certain smattering of a "little Latin and less Greek" is still regarded, whether rightly or wrongly, as part of the education of a gentleman. This is a social tradition which is deep-rooted, and although real scholarship in the classical languages is rare, in spite of the vast amount of time which is devoted—during school and university life—to their study, it is kicking against the pricks to suggest that subjects which will be more useful to a man in after-life might, even as a form of mental training—and that is the reason now usually given for the retention of the prominent position occupied by the classics in our large secondary schools—take their place with advantage in the school curriculum. If as much time were to be devoted to the acquisition of a knowledge of French and German as is given to that of Latin and Greek, the result would at least be the acquisition of knowledge which would in nine cases out of ten prove an important advantage in a man's subsequent career, and most emphatically is this the case if that career is to be the profession of medicine. The Latin and Greek which is learned at school by most boys is in 99 cases out of 100 useless to them in their future occupations, and even in the medical profession, where terms derived from those languages are largely employed, a very small acquaintance with them is sufficient for understanding such terms. It is merely commonsense to insist that it is better to have a useful acquisition than one which at the best is purely ornamental; but experience teaches that when we oppose commonsense to tradition the latter usually comes off victorious. There is, indeed, nothing so hard to eradicate as a long-standing tradition. It has often happened before, and may happen again, that clinging to traditions has barred the way of advancement of whole communities and races of mankind.

Natural Science in Secondary Schools.

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But whatever may be thought about it as a subject of general education, a knowledge of the sciences is an absolutely essential preliminary to the study of medicine, and because such knowledge is not imparted in our schools, it has become necessary to incorporate into and in so far to burthen the medical curriculum with courses of preliminary science. At least a year of the precious time which might be devoted to the study of medicine is thereby occupied by subjects which could be equally well acquired before the study of medicine is actually begun. This is only partly due to the fact that secondary schools do not lay themselves out to give instruction in science. For even if they did so, and if the education they gave were as thorough and practical as it should be, and as it undoubtedly is in a very few exceptional instances amongst English public schools, the rules of the General Medical Council would render the taking of it in schools nugatory. For there is, as you are aware, a regulation of the General Medical Council to the effect that no course of instruction which has not been attended subsequent to registration as a medical student should be permitted to count in fulfilment of the requirements as to science courses necessary for qualification. In other words, a student may have gone through at school or even at college a thorough course of instruction in the natural sciences, and is yet, unless he happen to have had himself registered beforehand as a student of medicine—debarred from presenting himself at the preliminary scientific examination for the medical degree of a university until he has again attended the same courses in the medical department after registration. You are further doubtless aware that this regulation is at the present moment being defied by the Royal Colleges of Physicians and Surgeons. Whatever the motives of the Royal Colleges may be, I confess they have my entire sympathy in the action they have taken, and I trust the result will be that this registration of medical students will be either ended or mended, for as it at present stands it is a direct discouragement to the teaching of science in schools. But although the main fault lies with the General Medical Council in maintaining a regulation the utility of which has long been a negative quantity, one cannot exonerate the universities themselves in the matter; indeed, I am not sure that the continuance of the regulation is not the result of the large representation which the universities possess upon

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I suppose that most intelligent boys of 16 who have been properly taught would have no difficulty in passing the preliminary examination in arts which is required for any medical degree or diploma, since they have by then acquired a sufficient knowledge of classics and other subjects of general education. But it is customary to keep boys of the upper classes at school until 18. The years from 16 to 18 are two of the most important years of life. Intelligence is by then fully developed, memory is retentive, attention readily concentrated. Nevertheless these two years are ordinarily occupied by an extension of instruction in the same subjects as occupied the earlier years; or, if there is any change, it is in the direction of the exclusion of all other study but that of classics and mathematics, the former usually greatly preponderating. As I have already said, these studies can be of no conceivable advantage in after-life to 99 out of 100 boys. But supposing that this time of life were occupied—not as an exception but as a regular thing—in all schools by similar systematic instruction in one or more branches of science, as it is now customary to give in classics. Will any one contend that such general instruction of all boys in the principles of science—instruction which I would emphasize must be of a thorough and practical nature—would not be an incalculable gain? No one would be a worse man of business, a worse lawyer, a worse clergyman for possessing a little accurate knowledge of the nature of things. As compared with the acquirement of a little classical learning, the gain to the individual would be great, to the community still greater. But for the future medical man the advantage of such a course is preponderating. Even if a part only of the two years were devoted to science study, he would be able to acquire before leaving school for the university a far better knowledge either of biology or of chemistry and physics than he does in the meagre amount of time which is often alloted to those subjects in the crowded medical curriculum.

I am, it will be seen, a strong advocate of the relegation of the teaching of the preliminary sciences of the medical curriculum to the school period. But I recognise that it is at present impossible by reason of two circumstances—one being that most schools are not yet organised for the proper teaching of science, and the other that the regulations of the General Medical Council and of the universities directly or indirectly discourage such teaching. Were this disability removed I am convinced that the other circumstance would in the course of time right itself. Schoolmasters are not an obstacle. They will teach whatever it is to the advantage of their pupils to learn. But until the universities encourage—cease, I ought to say, to discourage—the teaching of science in schools, it will not be adequately taught there. I trust that your new University at least will do what in it lies to promote this reform—one of the most important, I believe, which can be instituted—not only in the interests of the medical profession in this country, but in those of the community at large.

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You will be saying to yourselves that I have got away to the ideal, which I promised to avoid, and in a sense that is true, for it is impossible to suppose so fundamental a change in school teaching to be within the range of early possibility. We must, in the meantime, take things as we find them—that is to say, take students and begin their training as medical men at a stage when they are in most cases still entirely ignorant of any of the natural sciences, and it is for these that we must plan out our medical curriculum. In it must therefore be included the so-called preliminary sciences—that is, physics, chemistry, and biology. But if the student can produce evidence that he has attended a sufficient course of instruction in any or all of these subjects, and can pass a qualifying examination, he ought to be exempted from any further attendance in that subject or subjects, whether previously registered or not. For if he were able to pass in all, this would at once enable him to proceed with what may be termed the medical curriculum proper, and he would have the advantage over his fellows either of obtaining his degree within four years instead of five, or of being able to devote one year more than they to actual medical subjects. At present, in the vast majority of instances, these preliminary sciences have to be included in the curriculum, which msut also include anatomy and physiology, pharmacology and pathology, hygiene and forensic medicine, midwifery, surgery, and medicine.

In devising a plan of study and examinations which shall embrace all these subjects, it seems a mere platitude to say that they should be taken, not haphazard, but in a regular sequence; that one subject or class of subjects should lead up to another; that no part of the curriculum should be begun until the parts which should rightly precede it have been mastered. The reason for including physics, chemistry, and biology in the medical curriculum is that anatomy and physiology, especially physiology, can only be understood by those who have previously acquired a knowledge of these preliminary sciences. Physiology is the physics and chemistry of the living organism, and it is obvious that it cannot be studied before, or even along with, these subjects; they must first be mastered. It is therefore clear that the first part of the curriculum must be given up to physics, chemistry, and biology, and it is impossible to allow less than one year to those subjects; they cannot be learned in less time, and I doubt whether any student can obtain such a mastery over them even in a year as will enable him to follow out the physical and chemical problems which are presented by the animal body. Here, once more, comes out the supreme importance of rendering it possible to acquire the necessary knowledge of at least a part of these subjects at school.—*B.M.J.*

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THE INCONSISTENCY OF DR. KOCH.

By G. D. Alexander.

In 1897 Dr. Koch was commissioned to go to East Africa to investigate the cattle diseases on the coast, and in his report written from Dar es Salem on October 27th, 1897, he writes :—"After the rinderpest had four or five years ago, on its way from the Somali country to South Africa, ravaged the greater portion of the protectorate, nothing further was heard of dangerous cattle pests in the interior, and stock seems to have flourished again in most of the cattle rearing districts in a gratifying manner, while only on the coast outbreaks of pests occurred from time to time which swept away many cattle. Despite the trouble the Imperial Government went to in always re-stocking the coast districts, cattle breeding there has on this account made no progress. These pests were hitherto shrouded in complete darkness, it was unknown whether one had to do with one or several diseases, and whether the disease was imported from the interior or originated on the coast. These questions were fortunately very soon decided by means of microscopic investigations which showed that the dying off of cattle on the coast is caused by two separate diseases, namely, Texas fever, and the surra or tsetse disease."

He then goes on to report on the surra or tsetse disease. This extract is quoted to show that he then limited the diseases on the coast to the two he names, and there is not a word about African coast fever.

On the 15th of November, 1897, writing from Dar es Salem he writes as follows :—

"Supplementary to my report of 22nd Oct. last—a certain percentage of the cattle which die from cattle pests on the East Coast of Africa are swept away by the surra disease, but a far greater percentage by a disease which in symptoms, condition of the blood, and appearance of the body after death is so similar to a certain cattle pest, known in the United States as Texas fever, and which has been carefully studied by American investigators that "I have no hesitation, despite certain variations in character, in saying that the cattle pest which prevails here is Texas fever. . . . . In examining the animals that had died, I could prove all the changes which American investigators give as peculiarly characteristic of Texas fever. . . . . In a certain number of the animals examined by me I could trace the developed pyrosoma bigeminum. It answered the description given of it by Smith and Kilborne so perfectly that no room for doubt was left regarding the identity of the parasite here found with that discovered in American cattle." Only with regard to the early forms of the pyrosoma and the relations of both it and the full grown parasite to mild and severe Texas fever, I have come to different conclusions from the American investigators. I found, namely, particularly in the red blood corpuscles of cases which took a severe form and rapidly proved fatal, strange forms resembling miniature staves so that one might take them to be small bacilli. These are frequently slightly curved and sometimes so strongly that they form rings, and in that case look very much like the parasite of tropical malaria. Frequently these little staves are slightly thicker in the centre ; they then clearly show a double outline and assume the form of a willow leaf. Between such forms and the pear-shaped form of the full grown pyrosoma there are a number of intermediate stages, and I have, in consequence, formed the conviction that the parasites I found are the real first forms of the pyrosoma. . . . . Up to the present time I have been able to determine Texas fever in 35 animals with a greater or lesser abundance of parasites, and in a herd of 58 animals which had recovered from the disease I have found 28 head 'infested with isolated first forms of the parasite.' All these animals had been brought to the coast from inland and had sickened soon after arrival."

From the foregoing it is to be noted that in 1897 Dr. Koch "has no hesitation in saying," and "that no room for doubt was left," that the disease on the East Coast of Africa was Texas fever (South African red-water), and that he "formed the conviction" that the small stave-like forms that ultimately assumed the form of a leaf were the "real first forms of the pyrosoma (the parasite which is regarded as the cause of Texas fever.)

On 23rd May, 1903, in reporting on the cattle disease in Southern Rhodesia, Dr. Koch writes :—The occasional appearance of hæmoglobinuria (redwater), and the existence of pear-shaped parasites in the red blood corpuscles led to the conclusion that the Rhodesian disease was identical with Texas fever or at least one closely allied thereto, although more virulent ; but if one gives the Rhodesian disease a careful consideration (which is equivalent to saying that those investigating the disease before his arrival did not do so) "important differences appear, which I think are even more important than they have been considered to be by the majority of observers. . . . . In Texas fever, there appear in the red blood corpuscles, and in its initial stage without exception the large pear-shaped twin parasites so characteristic of the disorder. . . . . It is quite different with the Rhodesian fever. Here, too, we have found blood parasites, as proved by the microscopic examination of the blood of every sick animal submitted to our scrutiny, but these are of different shape and considerably smaller than the pyrosoma of Texas fever" (I suppose those are the 1897 stave-like parasites that are sometimes curved so that they form rings, and frequently assume the form of a leaf). "In the early stages of the disease they are, as a rule, not very numerous, but their number increases from day to day. . . . . In the first days of sickness only rod shaped (?) or very small ring shaped parasites are observed, but if the animals remain alive a little longer a number of somewhat larger parasites make their appearance, these are disc shaped or resemble a leaf in outline. . . . . I am of the opinion that these differences are of sufficient proof that the Rhodesian fever, although allied to Texas fever, and belonging to the same class of diseases, is still a distinctly different disorder. . . . . We must, therefore, in describing such pyrosomal diseases of cattle discriminate clearly between Texas fever and Rhodesian fever, because in these two diseases the causal parasites, the symptoms to which they give rise, and the pathological changes in the organs, are different. . . . . The problem would be well nigh insoluble if there was not one piece of evidence in our possession which I became cognisant of some years back," (1897) "namely, that the same disease exists on the East African Coast, as has now broken out in Rhodesia, and that in German East Africa the disease was carried inland in a similar manner to that in which it may have been brought from Beira to Umtali. . . . . The stock on the coast of German East Africa are apparently quite healthy . . . . but as soon as other cattle are brought there from clean districts for instance, from the inner parts of the country and graze on veld on which the cattle from the coast have been grazing, these imported animals will get sick and almost all die. The indications of this disease are the same as those of Rhodesian fever, and in the blood of these infected animals which I have many times examined I have always found the same small blood parasites which I have again seen at Umtali, Salisbury, and Bulawayo. . . . . In appearance in Rhodesia the disease has conformed to a natural law which it has often followed aforetime. It has been brought inland from the infected coast districts as it has previously been in many other instances, and, therefore, it appears to me much more reasonable to call it 'African coast fever,' in preference to calling it 'Rhodesian fever.'"

(In 1897 he had "no hesitation in saying," it was Texas fever).

The foregoing should convince the reader that Dr. Koch has misled fellow scientists, but to make it still clearer I will make two further extracts from his own reports.

Writing from Dar es Salem, on the 15th of November, 1897, he says :—"I came across a most characteristic case of Texas fever in the neighbourhood of Mohesa, the terminus of the Usambara railway. Here I found a herd of 33 cattle, amongst which a number had become very ill, and some of them died in the course of a few days previous to my arrival. Five animals which appeared to be severely ill, were examined, and in four of them the acute form of Texas fever was found, to which they shortly after succumbed. This herd consisted of loot cattle, and hailed from Kilimanjaro. They had at once been taken coastwards to Tanga, where naturally they had been exposed to the infection of Texas fever. Here they should have been left and sold as slaughter cattle, but instead of this the mistake was made of sending them back into the interior, and in that way extending the infected area to the railway station at Muhesa, while in the interest of cattle transport just this point should have been kept free from infection.

Turning now to his report of May 23rd, 1903, on the cattle disease in Southern Rhodesia, Dr. Koch writes as follows :—"Six months ago, at Tanga, I saw an outbreak of exactly the same character as the present Rhodesian one, although of smaller dimensions. In this case a herd, which was brought into the infected area at Tanga, and which became infected there, carried the disease thence to Mohesa in the interior." . . . . "As we know that in the pyrosomal diseases, whereto the Rhodesian fever belongs, ticks play a most important part as agent for the dissemination of infection, I have occupied myself thoroughly with this side of the question. For this I have had special facilities, as in my earlier work on the pyrosomal disease at Dar-es-Salaam, which I have identified with Rhodesian fever, I produced it with infected ticks in the far distant Usambara Mountains, and so proved that the ticks are also the intermediary agents in this disease."

According to these reports, Dr. Koch states that A (which is East Coast of Africa cattle fever) is equal to B (which is Texas fever, tick fever or redwater) and that C (which is Rhodesian fever, is also equal to A, but that B is not equal to C.

In his last report, Dr. Koch has made one thing very evident, and that is, if Rhodesian fever is the same as the cattle fever on the East Coast, then his conclusions on the former investigation, made by him on the East Coast were wrong, and have been the cause of misleading other scientists who had not the opportunity of making the investigation, and who took Dr. Koch's dictum as being that of a distinguished and careful scientist.

Now the result of Dr. Koch's inconsistency is that he has given faulty information, and has, therefore, led other scientists astray. Mr. Gray, Mr. Robertson, and Mr. Pitchford had only to satisfy themselves that Rhodesian disease was the same as the West African disease, then according to Dr. Koch Rhodesian disease was the same as redwater. In November, 1902, Mr. H. Watkins-Pitchford, F.R.C.V.S., who by the way did not investigate the disease, but visited Rhodesia by instruction of the Natal Government, to note the investigations of Messrs. Grey and Robertson, wrote on the disease, "That Professor Koch, in his East African investigation, was dealing with the same disease now threatening us, there is little doubt in my mind."

There is no doubt similar conclusion was impressed on the minds of Messrs. Grey and Robertson, M.R.C.V.S.

Having arrived at this conclusion, and published it to the world, Dr. Koch is sent for at great expense, and he finds that West African disease is the same as the Rhodesian disease, but that the Rhodesian is not redwater, and the world says "wonderful man Dr. Koch, what would we do without him. Look at that Rhodesian disease, all the other investigators were astray until Koch took it in hand."

In the early part of the century British singers and British music could obtain no hearing, the singers or composers with foreign names alone received the applause. To such an extent was this carried that British singers had to adopt foreign names or remain unheard.

The same state of affairs seems to exist with regard to scientists in these times, especially in South Africa. If Messrs. Pitchford, Grey, and Robertson would alter their names to say, Herr Pitchiforditsha, Signor Greysini, and Monsieur Robertsoni, they might be given the opportunities at present denied them. As it is at present their salaries, which considering the expenses they have to incur may be called a bare living wage, is all they have to look forward to. When any investigation is needed the powers that be wire at once for some Continental scientist, and give enormous sums and a blank cheque for expenses, although there are equally good men here.

In writing on this matter I am not actuated by any personal feeling. I know neither Dr. Koch, Mr. Grey, or Mr. Robertson. I certainly know and admire Mr. Pitchford for his scientific attainments, and I do not think the work he has done for science, and for the benefit of the Colony and the world, has been recognised. But the reason I have drawn attention to the inconsistency of Dr. Koch is because "Fair play is bonnie play," and I consider Dr. Koch has not given his fellow scientists fair play. His desire to annex all credit, whether belonging to him or not, is very apparent. In his report from German East Africa from which I have above made excerpts, he writes :—"I have still to report the following about the further development of the two methods of immunising against rinderpest, which I have discovered."

He then goes on to write on bile inoculation, and later on says : "The second method of immunising, through a combination of serum and virulent blood, was subsequently in so far improved upon by Kolle and Turner, that they succeeded in immunising cattle to a higher degree, etc." No recognition is given by him to Mr. Pitchford, F.R.C.V.S., the true discoverer of the serum treatment.—*The Natal Witness.*

GLASGOW VETERINARY COLLEGE.

An Address delivered on 23rd October, 1903, at the opening of the Session 1903-4, by WALTER COLQUHOUN, M.A., M.B., C.M., Muirhead Demonstrator and Senior Assistant to the Professor of Physiology, Glasgow University.

Mr. Principal and Gentlemen, when I was asked to address you at the beginning of your Session I felt myself so honoured that I am afraid I accepted the task somewhat rashly. I can lecture quite easily to my students day after day, because I have a definite subject, a definite amount of work to cover, and the students are presumably at the same stage of advancement. On thinking over my address to you, the difficulty was to find a subject. I felt that if I should choose a branch of some science I would run the risk of boring the junior students by being too abstruse, or the seniors by being too elementary. Being thus in a quandary, I asked myself the question "What would the gentlemen like to know?" I am ashamed to tell you the answer which presented itself, and I hope that it will not offend you. The answer was "Living, as they do, in the Twentieth Century, they probably wish to know how to make

money." Gentlemen, I have never managed to make money, and on that point I have to refer you to Mr. Carnegie's speeches. He preaches continually "Study, improve your mind, and you will better your position in the world, and possibly become, even as myself, a millionaire." I also say to you "Study and improve your minds," because I know that if you become real students, thoroughly imbued with the desire for truth, very few of you will make money, and further, that if any of you should perchance make money, you will consider yourselves well repaid if you should find one truth at the cost of spending it to the last penny. I have much respect for Mr. Carnegie, because I recognise that he has progressed considerably beyond his environment, but he would have to live another hundred years before he could comprehend the academic or the scientific view of the scramble called Life, or the attitude which caused Mark Akenside, a physician of the Eighteenth Century, to write :—

"Raise me above the vulgar's breath,
Pursuit of fortune, fear of death,
And all in life that's mean ;
Still true to reason be my plan,
Still let my actions speak the man,
Through every various scene."

It is said that Pythagoras, when he discovered the 47th proposition of the First Book of Euclid, which you will remember proves that the square on the hypothenuse of a right angled triangle is equal to the sum of the squares on its sides, offered up a sacrifice of one hundred oxen to the Muses, humbly deeming that such a discovery, of which he saw the far-reaching results, was beyond mere human effort.

When Archimedes, buoyed up by the water of his bath, suddenly thought of how to distinguish subjects by their specific gravity. he rushed from the bath unclothed, crying "Eureka ! I have found it out."

To come to later times :—You all know the difficulty the older histologists had in cutting thin sections suitable for examination under the microscope. Their methods of hardening the tissues were defective, and they embedded them in carrot or elder pith, or in amyloid liver, or similar substances, and cut sections by hand. You can imagine the difficulty they had with soft nervous tissue ! On January 25th, 1842, a great neurologist, of the name of Stilling, left one night a piece of spinal cord on his window sill during a hard frost. In the morning he found it frozen quite hard, and, being in the habit of making sections of what happened to be in his hand, he made a transverse section through it in the frozen condition, and examined the section under a magnification of 15 diameters. He wrote :—

"When I saw the magnificent radiating bundles, and the central tracts of nerves, I realised that I had discovered the key that would open up the chambers of the wonderful structure of the spinal cord. Not more gladly did Archimedes call out his 'Eureka' than did I shout out on beholding that sight."

At the present time every student can examine sections of the spinal cord, made with the freezing microtome, under a power of at least three hundred diameters. I have given you a few glimpses into the minds of true students—searchers after truth—at the moment of the fruition of their search. Do you think, for a moment, that such men would have been moved in the least by the doctrine which is now being preached to the youth of the country ? Had I the time at my disposal, I could bring forward a long record of scientists who have beggared themselves and their families in search of truth ; of preachers who have chosen poverty and even death in support of what they deemed the right ; of doctors who have sacrificed themselves for their poorest patients ; of noble leaders who have sacrificed everything for the cause they supported. Many of the epoch-making discoveries of our patient searchers after truth, worth tens of millions of pounds to the world, have the discoverers in comparative poverty ; and yet, if we hear their voices raised in complaint, it is because their beloved Sciences do not receive sufficient support, and that the progress of Science is thus retarded.

You are wondering no doubt what my address, so far, has had to do with veterinary seience. I am coming to the point. You are preparing yourselves to enter a profession which, as I will demonstrate before the end of my address, will afford you great facilities for advancing scientific knowledge, more especially in connection with medical science. Each of you has a choice of two courses open to you. You can grind up your work, pass your examinations, then lay aside your books, and, without any further mental strain, devote your time to forming connections in pursuit of the half-crown, treating your patients by rule of thumb—that is to say, you can degrade your profession to what was spoken of contemptuously by the medical profession, so long ago as the beginning of the eighteenth century, as "Farriery." Or by assiduous study of the sciences bearing on your profession, and by constant exercise of the power of observation and of your reasoning faculties, you may not only better alleviate the sufferings of the animals committed to your care, but you may make discoveries of the utmost importance to mankind. Further, by adopting the latter course, you will increase the dignity of your profession, give yourself a joy not to be obtained in the pursuit of wealth, and obtain the respect of those who, while they may sneer at the state of your bank account, secretly honour you.

Your profession offers probably rather more facilities for scientific research than the medical profession. Animals are liable to many of the diseases which afflict the human race. The action of drugs is in most instances the same on domestic animals as on human beings, and indeed for accurate knowledge of the action of drugs, we experiment on animals. There is little difficulty in obtaining a post-mortem examination of your patients. You are not liable to be misled by your patient's account of its illness, and consequently confine your attention to the more valuable objective signs. Lastly, you have more facilities for experiment in treatment.

Most of the recent advances in medical science, some of which I will deal with directly, could quite well have come from your profession. Before proceeding to deal with them, I would like to indicate to you shortly the state of medical science about the middle of the eighteenth century, say the time of the rebellion of 1745. If you are ever so fortunate as to see a copy of that quaint old book "The Pharmacopæia Extemporanea," by Fuller, 1730, in a second-hand dealer's shop, buy it at once. It was the first Pharmacopæia printed in English, and its quaintness and originality will long afford you amusement and instruction. On glancing through it, you will first notice a panegyric of ale, introducing the section on ales, of which there are 31. You will find antimonial, arthritic, aperient, cancer, diuretic, chlorotic, etc., ales. The panegyric is so quaint and throws so much light on the ideas of the time, that I quote part of it—it may interest our magistrates.

"Whatever some outlandish men may invidiously say, and others as rashly believe, middling ale, brew'd of the best malt, boiled, fermented, depurated according to art ; that hath no burnt, musty, or otherwise ill Smack ; that is pale, sparkling, fine, fresh, and not upon the fret ; and also, is of Age just to leave its Malty Taste, grow Winey, and yet not run into any degree of Sourness ; such Liquor is the most comfortable and coveted Drink the World ever yet found out, to pacify the loudest of Nature's cries, under the Tortures of a burning, hot, thirsty Stomach.

For beyond all other things, it cools and moistens the parched Membranes of the Stomach ; scoureth salt, acrid, bitter, frothy, slimy Filth, from off the Villæ, and

Glands; turns it over the Pylorus, and leaves a balmy begnign Litus instead, to keep all supple and easy. Thus it quencheth that most insufferable Passion of Thirst, refresheth the Bowels, relieveth the Spirits, and proves a true Cordial in outrageous scalding Fevers"—and so on for two pages more.

One naturally turns from ales to purges, to see what treatment our free-eating, heavy-drinking ancestors required. One finds, under the heading—

"A Common Purging Bolus."

Take powdered jalap from one scruple to half a dram; Scammony powdered from 3 Grains to 6; Calomel 15 grains; Oil of Aniseed 1 Drop; Senitive Electuary, as much as is fit to make it up with."

My patients complain when I order four grains of Calomel to be followed by a double seidlitz powder. What a degenerate race we are; one is not surprised to find that Fuller remarks, "It worketh pretty smartly; and therefore purgeth not only what lieth loose in the Ventricle and Intestines, but other Humours likewise, from the Bilious and Pancreatic Passages, and especially from the Glands of the Guts."

One next notices the large number of ingredients in each prescription, and the fact that at least one drug amongst the number is suitable to the disease. At that time the active principles of drugs had not been separated, nor had accurate experiments been made on animals as to their effects. The pathology of the day was the humoral one, and, to modern minds, the wording of the therapeutic notes is very quaint. Some extraordinary ingredients appear in the prescriptions such as snail juice, millipedes, horse dung water, dead mens' skulls. The large number of ingredients in the prescriptions was pretty much a matter of custom, drugs being added to former prescriptions as they were reported suitable for certain diseases by physicians of repute. Fuller, who was in advance of his time, draws the line at dead men's skulls, and in his therapeutic note writes:—

"This prescript is in compliance with the customs of practice, but for my own part I declare I abominate it. For I take man's skull to be not only a mere dry done, void of virtue, or any manner of effect, but also a nasty, mortified, putrid, carrionish piece of our own species—man; and to take it inwardly, seems such a horrible, execrable fact that even the Anthropophagi would shiver at it; and therefore, in my opinion 'twould be decent and almost pious to carry them all out of the shops and

Ossa sepulchrali contumulare domo."

One other quotation I will make. Writing of the action of Cantharides, he says:—

"Of all things that we know, cantharides most powerfully provokes urine, and that (it's thought) by means of their plenty of volatile sulphur, and acrious caustic salts, which, being liquable in the serum and carried to the reins and bladder, sometimes stimulates, pricks, and erodes to that degree as to cause grievous strangury and blood urine."

Now follows a criticism which shows that the best minds of the profession were awakening to the necessity of experiment. He goes on to write:

"Some have set their philosopy to work about this and said, cantharides are full of fine sharp prickles, and these make abundance of little wounds, and consequently the said pains. But this seems unlikely, forasmuch if you grind and mix them with oleose viscid things, which are likely to break off and sheathe up those points, yet they will produce the same effect which the fine thinker may consider of."

Since the period which we have been considering medical science has made enormous strides, the greater part of the progress, however, being in the latter half of the twentieth century. The progress was rendered possible principally owing to the progress of the sciences of chemistry and physics. The active principles of drugs have been isolated, and their action on the various organs accurately studied in the laboratory by experiments on animals. With the advance of chemical knowledge new drugs of known chemical composition and of undoubted purity have been discovered and experimented with.

Anatomical science is now exact and thorough since provision was made for a regular supply of bodies to our centres of learning, and a method of preserving the bodies by means of antiseptic injections was discovered, so that students could pursue their dissections in a leisurely and thorough manner. Not so very long ago dissections were made with a rush before the bodies became too offensive. Improvements in practical optics have, through the microscope, given us a thorough knowledge of the minute structure of the body. Advance in chemical science together with our knowledge of histological structure have enabled us to definitely ascribe definite functions to the various organs. Our assumptions in this respect are amplified or checked by the results of disease of the organs as shown by clinical reports and post-mortem examinations in the large hospitals established throughout the country. Owing to the genius of Lord Lister, antiseptic surgery rather preceded than followed an established connection between micro-organisms and diseases. The connection once established has led to the advance from antiseptic to aseptic surgery, and to the placing of preventive medicine on a pinnacle by the establishment of appointments of officers of public health whose duty, briefly stated, is to hunt down pathological micro-organisms, to find their habitations, to cabin and confine them when they are in an active condition, to connect their activity with meteorological and other conditions, to take all measures to prevent their multiplication and dissemination. By the help of the improved apparatus and methods of physical science, the electrical phenomena of nerve and muscle have been minutely investigated and the connection between stinuli and muscle contractions has been investigated. Chemical science has enabled us to easily obtain the ultimate analysis of the constituents of the body, and the more difficult task of obtaining formulæ for them is well advanced. Much progress has yet to be made in this branch of investigation, because the most potent principles in the body, such as enzymes, oxidases, toxins, antitoxins, yet defy analysis. Chemical science and its younger sister bacteriological science have shown us that the animal body is a laboratory which can manufacture its own antidotes to a poison introduced within it or produced within it owing to derangement of function or to bacterial activity. It remains for the science of the future to discover how this defensive activity can be increased by the administration of drugs. New radiant forms of energy, recently discovered, have been impressed already into the service of medical science. Even the recent work of Prof. Dewar on the liquefaction of gases has already been utilised, microbes being ground up in liquid air, the low temperature of which renders them quite brittle. We are thus enabled to try the effects of the material of which the microbes are composed.

Now, gentlemen, the point which I wish to make is, that most of these advances could quite well have come from your profession, and, indeed, a good deal of work, especially in bacteriology, has come from the Continental veterinary colleges. Why then have the veterinary schools in this country not contributed more to the advancement of science? The answer is, I think, to be found in your Principal's able address at the beginning of Session 1901-2. Of the five veterinary colleges, only two, as he pointed out, situated in London and Dublin respectively, have received pecuniary aid apart from fees of students. At the present time it is quite impossible to undertake research under such conditions. This country is already suffering from the insufficiency of

what you might consider the rich endowments of its Universities and technical Colleges. Modern laboratories are very expensive for upkeep. Students, who are overwhelmed by the facts of medern science during the course, cannot be expected to undertake scientific research. The ablest graduates are oftenest in such circumstances that they cannot undertake research unless their livelihood be secured to them by scholarships. Even Professors whose Chairs are not sufficiently endowed to remove from them anxiety regarding their living are not in a state of mind fitting them to undertake patient investigation. The wonder is that so much has been done in this country under the circumstances. As has been pointed out repeatedly, University and technical education receives much larger support from poorer Continental countries, and the veterinary colleges are in most instances Government institutions. Your college has done excellent educational work for 38 years, depending only on the students' fees. It has deserved well of the State, and has been quite unrecognised by the State. Yet, as I have made plain, I hope, in my address, no better investment could be made than a grant to colleges such as yours, which would enable them to set a band of earnest graduates at work to help the advance of medical science. I believe that the day is not far distant when you will obtain recognition and support either by a sufficient grant from Government or by affiliation to the University. The latter scheme, by setting free a considerable part of your College buildings for purely veterinary work, would put you on a more satisfactory footing at comparatively small outlay.

WATERING HORSES.

Watering horses is a subject of some importance, and there are few owners who have not their own ideas on the subject. In the recently issued American report on horse feeding, to some of the main points of which I have alluded, several points connected with the matter are dealt with. These embrace a large number, from which I select the following:

Why Water is Needed.

On this point it is pointed out that horses, like other animals, require water to moisten their food so that the digestive juices may permeate it readily, to dilute the blood and other fluids of the body, and for other physiological uses. It may be assumed that under any normal condition the body contains a definite amount of water. When any considerable amount of water is lost from the body a sensation of thirst is experienced showing that more water is wanted to take its place. Practically all the water excreted leaves the body in the fæces, urine, perspiration, and breath. The amount eliminated in each, according to Wolff's experiments, increases with the amount of water consumed. In these researches the total amount of water consumed by horses per day ranged from 38·3 lbs. to 75·6 lbs., or, roughly, from four to seven and a half gallons. The fæces contained from 40·3 to 47·3 per cent. of the total amount excreted; and the urine from 21·2 to 34·9 per cent. The amount either retained in the body, or thrown off in the form of perspiration or breath ranged from 17·8 to 38·5 per cent. These figures deal only with the water actually drunk by horses, but it must not be forgotten that when succulent foods are given, there is a further considerable amount of water in these.

Amount of Water.

There are a number of factors which influence the amount of water required by horses, and these include the season of the year, the temperature of the surrounding air, the character of the feed, the individual peculiarities of the horse, the amount and character of the work performed, and probably others. The quantity of water needed increases with the temperature and with the amount of work performed, since it is very evident that both these factors increase the amount given off in perspiration. Muscular work also increases the amount of water vapour excreted in the breath. According to Grandeau and Leclerc's experiments with Paris cab-horses, the horses (on the average) evaporated 6·4 lbs. of water per day when at rest; 8·6 per day when walking; 12·7 lbs. when drawing a load; 13·4 lbs. when trotting; and 20·6 lbs. when trotting and drawing a load. In these same experiments it was shown that the average proportion of water drunk by horses ranged from 2·1 lbs. to every one lb. of dry food when at rest to 3·6 lbs. for each one lb. of dry food when working. In some of Wolff's experiments the proportions varied from 2·35 lbs. of water to each lb. of dry food to 3·5 lbs. of water. The character of the food given also affects the amount of water required. A concentrated food—such as oats, maize, and good clover hay—would require less water than one which included straw or other rough fodders. Where succulent food, such as roots or green clover, are fed, less water again is needed. The weight and size of the horse is another factor. In many of the experiments at the United States stations the individuality of the horse was the greatest factor of all. In fact, under different conditions of work, climate, feed, size, and individuality, experiments have shown that the amount of water consumed by a horse per day varies from 2½ gallons up to 10 gallons. The larger amounts, however—say, six gallons or over—are all under American conditions. On a very hot day, at the Oklahoma station, on a ration of Kaffir corn, maize, oats, and bran, a pair of horses (1,065 lbs. each in weight) drank 35 gallons of water without a shadow of injury. It may therefore be said that the amount of water which should be given to a horse must depend largely on the discretion of the owner. The latter should study the individuality of the animal, the work it is doing, and the food it is receiving.

When Should a Horse be Watered?

Opinions differ widely as to the proper time to give water to horses. Many owners and stablemen believe they should be watered before feeding, while others are equally certain that feeding should precede watering. None of the American experiments have shown that either of these methods is better than the other. Dr. Tangl has, however, made a series of experiments extending over several years, and with various rations made up of maize, oats, hay, and stray. In some of these the horses drank before, and in some after, eating; and in others after the grain portion of the ration was eaten, but before the hay. These showed that the time of drinking had no effect on the digestibility of a ration of grain and hay. When hay only was fed there seemed to be a slight advantage in watering before feeding. In general, horses may be watered before, during, or after meals without interfering with the digestion or absorption of food. All these methods of watering are equally good, and each of them may be employed according to circumstances. But, although all methods of watering are equally good for the horse, it is not desirable to change unnecessarily from one method to another. Animals, or at least some of them, appear to be not altogether indifferent to such a change. In Dr. Tangl's experiments it was found that whenever a change was made in the plan of watering after feeding to that of watering before feeding the appetite fell off for some days; not that the horses did not consume the whole of the food given to them, but for some days together they did not eat with the same avidity as before, and took a longer time to consume their rations completely. A similar effect was not observed when the change was from watering before to watering after feeding, or from

watering after to watering during meals, or when the change was in the opposite direction to the last. It is possible that the method of watering before feeding, until the animal has become accustomed to it, produces a certain feeling of satiety.

When Times of Watering are Useful.

But while there is little to choose between the time of watering, Dr. Tangl has come to the conclusion that there are circumstances in which both watering before eating and watering after eating are useful. After severe loss of water, such as occurs in consequence of long-continued severe work, the animal should always be allowed to drink before he is fed, as otherwise he will not feed well. On the other hand, if there are signs that the horse is slightly bound, watering after meals will make him somewhat more loose. The quantity of water, which a horse will take is also slightly increased when given after feeding.—*Newcastle Chronicle.*

CRUEL METHOD OF DOCKING HORSES AT WELLINGTON.

Veterinary Surgeons' Conflicting Opinions.

At Wellington Police Court on Monday, September 27th, before Mr. A. E. Payne (chairman), Lieut.-Colonel J. Patchett, and Messrs. H. Shepard, T. Corbett, and R. C. Simpson, a young man named Arthur Gardner, of the Britannia Inn, Hadley, was charged with causing a horse to be cruelly treated, and Thomas Steventon (popularly known as "Monty") was summoned for cruelty to the same animal.

Mr. R. T. Hughes (Sbrewsbury) prosecuted on behalf of the R.S.P.C.A., and Gardner was defended by Mr. J. W. Littlewood.

Mr. Hughes, in opening the case, said the charge of cruelty arose over the docking of a horse's tail; and without questioning the legality of the action in itself, he would be able to show the magistrates that the operation had been performed in a very unskilful way, and must have given a great deal of unnecessary pain.

Inspector Gibbs, R.S.P.C.A., stated that on August 24 he saw Gardner at Hadley, and told him that he had come to question him regarding the docking of a horse's tail. Defendant said it was true that such an operation had been performed, and that Steventon did it. He (Gardner) held the twitch, while Steventon cut off the tail and applied a red hot iron to stop the bleeding. Gardner also said he asked Steventon to dock the horse because Steventon told him it would strengthen its back, and put pounds on the value of the animal. Witness examined the horse and found that the tail had been docked exceedingly short. He told Gardner that he was surprised that he had permitted so cruel an operation to be performed, but he said he could not help that, as he had taken Steventon's advice. The horse, a chestnut gelding, about four years of age, was in fair condition. Only 6½ inches of the tail remained; the seared end of it was in a suppurating state, and the severed bone was protruding half an inch. It had been cut straight through and not at the joint. When he saw the animal it was in very great pain. On the same day, in company with Sergeant Bluck, he interviewed Steventon. When he told him what witness had heard and seen regarding the horse, Steventon said it was perfectly true that he performed the operation. He had docked thousands in his time and would do so again. He hoped witness would summon him, as it would be a good advertisement for him, although he had already done hundreds for some of the finest gentlemen in the land. Witness told him that the tail had been docked far too short, and it was still bleeding, and the horse was in great pain. Steventon repeated that he would give witness £100 to prosecute him as it would be such a good advertisement to bring him into court, for it would show people what a clever man he was. (Laughter.) He further said he would not have cut so much off the tail if it had been a big horse; but he thought a short tail would show off the hindquarters better.

P.C. Jenkins and Sergeant Bluck gave corroborative evidence.

Mr. Casewell (Newport), veterinary surgeon, said the operation should have been performed with a clean instrument at the joint, and the horse should have had surgical treatment afterwards. The searing to which Steventon was alleged to have had recourse was quite unnecessary.

By Mr. Littlewood: Witness often docked horses similar to the one in question. It was a usual thing to do, but witness objected to the manner in which Steventon had done it. It was done in a most unskilful manner; but that was probably more through ignorance than an intention to cause suffering.

Professor William Thomas Wilson, instructor in veterinary science at the Edgmond College, said he saw sufficient to prove that the docking operation had been performed in an unskilful manner. The animal was in good condition at the time he saw it, but it must have been in considerable pain; and in his opinion it must have been an extreme act of cruelty to serve the horse as Steventon was said to have done. There had been a cut through the bone, and the magistrates could judge for themselves how painful a red hot iron would be against the raw flesh. Such a process was quite unnecessary to stop the bleeding.

By Mr. Littlewood: The cruelty would of course be caused by the man who performed the operation. Searing was formerly resorted to, and no doubt was practised now; but a man, however, uneducated and inexperienced, must know that a red hot iron applied to a raw surface would give extreme pain. Witness could not agree that docking a horse's tail made the animal more serviceable; but it might make it look better.

Mr. Littlewood, addressing the Bench for the defence, contended that there was nothing to show that Gardner had committed any offence. He was a young man who considered that Steventon had had plenty of experience in docking horses, and relied upon him to do it in the proper manner. All the witnesses had stated that the horse was in good condition, and that indicated the care which had been taken of it.

Gardner gave evidence bearing out his solicitor's statement, and Steventon also gave evidence on his own behalf. He said he docked the horse in the usual way, and did not sear it to a great extent. He had done hundreds in the same way, and some of them were owned by magistrates who sat on the Wellington Bench, and a well-known veterinary surgeon who lived in the town.

Mr. Robert Clunas, M.R.C.V.S., Hodnet, said he had been summoned as a witness. He saw the horse in question that morning. There was a slight suppuration from the bone of the docked tail; but witness was not prepared to say whether or not the operation had been performed in a skilful manner. He himself docked hundreds of horses in the course of a year. He, however, did object to a man like Steventon performing the operation. In his opinion it was not the most humane method to dock a tail at the joint; nor did he admit that searing (properly done) was more painful than other methods adopted to stop bleeding.

The Chairman: In your opinion is a hot iron the best method of stopping the bleeding?—Witness: Yes, and the whole operation lasts only a few seconds, and the thing is done with; but other methods prolong it.

The Chairman: What are the other methods?—Witness: One is to stop bleeding by tying string tightly round the tail before the docking is done; and another is to use antiseptic fluids and tie up the stump.

The Chairman: Which of the three methods do you consider the most humane?—Witness: I prefer the hot iron, because it is the quickest, and is done with; but a red-hot iron is a different thing.

By Mr. Littlewood: A hot iron did not cause unnecessary suffering in such an operation, and that was the method he should have adopted if he had himself docked the horse. He objected to Steventon doing the docking, but not to the instruments he used for the purpose. The idea of causing less pain by going through the joint was fallacious; and he did not agree with what the other veterinary surgeons had said in that respect.

By Mr. Hughes: The bone ought not to have been burnt with the hot iron.

The Chairman: Do you consider that 6½ inches was too short to dock the tail to?—Witness: I do not think this was so short as that; but the length is not much to go by. I have seen some docked much shorter. I have one I could not drive unless it had been docked very short. The tail of Mr. Gardner's horse is not too short now.

After some deliberation, the Chairman said they had decided to convict Steventon on a charge of wilful cruelty. They considered he had performed the operation in a most unskilful manner, and he would be fined £2 and costs, or two months' imprisonment. As regards Gardner, they had reason to think that he relied solely upon the representations of the skill of Steventon to perform the operation in a proper way, and the charge against him would be dismissed.

Steventon asked for time to pay the money, but Chairman said they could not grant it to a man who went about the country and committed such serious offences as he had done.—Steventon: Well, I will go "home" once more. (Laughter.) He was taken there by the evening train.—*The Shrewsbury Chronicle.*

DISEASED PORK AND CHINESE DEALERS.

Chinaman offers $230 a Month.

At Penang Police Court, before Mr. A. T. Bryant, on Sept. 8th, a Chinaman named Yong Piu was charged with abetting on or about the 31st August last the receipt by Mr. E. Bell, the Superintendent of the Municipal Abattoirs, of a gratification other than legal remuneration, namely, $230, as a motive not to refuse to put the Municipal stamp upon the carcases of diseased pigs.

The Public Prosecutor, Mr. Woodward, conducted the case for the prosecution, and Mr. J. F. Wreford appeared for the defence.

Mr. Elton Bell, M.R.C.V.S., the Superintendent of the Municipal Abattoirs, was the first witness. He said:—"I live at Mistry Hall, Anson Road. On the night of the 30th August I went on inspection duty to a house in Sek Chuan Lane, where a large number of pigs are kept. Another European was with me. Defendant was there and wanted to speak to me, and asked if we could go somewhere else. I, the defendant, and the European, went to a bar in Chulia Street, where defendant said he wanted to speak to me privately. We both got into a rikisha and drove to my house, where I changed my clothes, and thence to the abattoirs. During the drive a long conversation took place. Defendant said that the butchers were very angry because diseased pigs were not allowed out of the Abattoirs, and also because the injection of water into the carcases had been stopped. He said the latter did not matter much as they could charge a little more for the pork, but it was a very serious matter when a man got a whole pig rejected. He asked me if it could not be arranged that by paying so much for each pig the diseased pigs could be passed. I told him certainly not. Then I left him. This would be at about 11.30 p.m. The next day about noon he came into my sitting room at my house and stated that the butchers were willing to pay me $230 a month if I would pass all diseased pigs. He said the Macao butchers were doing this and asked me to help them. He asked me if he might go and fetch the money. At the time I was looking at some coloured pictures. He asked if he might get them framed for me, as he did that kind of work. After arranging a price he took the pictures and went away. Shortly afterward he returned, and I told him I could not attend to him then, to come later on. I went and reported the matter to Dr. Park. When I got back about 5.30 p.m. I saw defendant near my house. I called Mr. Hunt, who lives in the next room to mine, and asked him to go into a little strong room which leads off my room. He did so, leaving the door ajar. The defendant came into my room. He came to my side and produced a roll of bank notes which he said he wanted to give to me. He said "I want you to pass all diseased pigs out of the abattoir," and also that he would pay me $230 a month for doing so. I called Mr. Hunt and asked him to count the notes. There were $230. I sent for a constable, and we all went to Hutton Lane Station and thence to Pitt Street, where I handed the notes to Inspector Williams.

I reply to some questions by Mr. Wreford, Mr. Bell said, "I believe it is true I am not very popular with the butchers. I did not know there was another petition being sent to the authorites against me. There have already been two. I am quite sure that defendant actually gave the notes into my hand."

Mr. Hunt, the Municipal Overseer of Works, was called, and he gave an exactly similar account of the proceedings from the time he went into the strong room as Mr. Bell. He heard and saw everything that went on, and was prepared to swear that no mention was made of pictures at that time, (as defendant stated later in his defence.)

Inspector Williams gave evidence as to receiving the notes and detaining the accused, and this closed the case for the prosecution.

Mr. Wreford then called the defendant Yong Piu. He said he was a dentist. His evidence up to the point where he and prosecutor took a drive was similar to Mr. Bell's, but his account of the conversation was very different. Mr. Bell, he said, would talk of nothing but the petition, and asked witness to use his influence with the butchers not to send in the petition. Next day at 11.30 a.m. he went to see Mr. Bell about some picture frames. Mr. Bell told him to come again at 5.30 p.m. When he came Mr. Bell would again talk of nothing but the petition. Witness wanted to get his pencil out of his pocket to make notes of the frames, but in order to get at the pencil he took out a roll of notes which he had and put them on the table. Mr. Bell said the notes were a bribe. The money had been given him by his employer to pay off a loan. When he went into Mr. Bell's room he could not see Mr. Hunt there. Mr. Bell called Mr. Hunt, who counted the notes, and then sent for a constable and witness was arrested.

The defendant's employer was called. He said that he gave defendant $230 to pay off a loan. When he next saw defendant he had been arrested. A book was produced showing entries concerning the $230.

Two other witnesses were called to give evidence concerning the loan and the proposed petition, and this closed the case for the defence.

Mr. Wreford then addressed the Magistrate on behalf of the accused, and some discussion followed concerning the wording of the charge.

Mr. Bryant, however, found the accused guilty, and sentenced him to six months rigorous imprisonment.—*Pinang Gazette.*

DISEASES OF ANIMALS ACTS 1894 & 1896.

SUMMARY OF RETURNS, WEEK ENDING OCTOBER 24, 1903.

Period.	Anthrax.		Foot-and-Mouth Disease.		Glanders (including Farcy)		Rabies. Cases Confirmed.		Swine Fever.	
	Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Dogs.	Other	Out-breaks.	Slaughtered *
Week ended October 24, 1903 ..	13	18	..	..	24	43	..	..	10	39
Corresponding week in 1902 ..	12	15	..	..	24	40	..	..	23	179
Corresponding week in 1901 ..	8	14	..	..	24	49	..	..	23	125
Corresponding week in 1900 ..	8	17	..	..	23	31	..	1	19	92
Total for 43 weeks, 1903	631	948	..	..	1244	2113	..	..	1251	6508
Corresponding period in 1902 ..	553	875	1	120	970	1746	12	11	1401	6649
Corresponding period in 1901 ..	512	727	12	669	1153	1994	1	1	2898	14064
Corresponding period in 1900 ..	443	768	17	227	948	1560	6	2	1659	15681

NOTE.—The figures for the Current Year are approximate only. * As Diseased or Exposed to Infection.
Board of Agriculture and Fisheries, Oct. 27th 1903.

Shipping Cattle by the Horns.

Before Sheriff Squair, at Stornoway, Simon M'Kenzie, cattle dealer, Scorraig, Lochbroom; Donald Macrae, cattle dealer, Lentran, Inverness; Donald Chisholm, cattle dealer, Inverness; and Donald Macphail, cattle dealer, Dingwall, were charged with cruelly ill-treating eighty cattle on the 25th of August last by embarking them on board the steamer "Ardmaddy" at Stornoway by fixing a rope around their horns and slinging them on board by means of the steamer's winch and derrick. They pleaded not guilty. All the witnesses for the prosecution said they thought that the slinging of the animals by the horns was an act of cruelty; but all admitted in cross-examination that the animals showed no signs of suffering pain. Mr. Struthers, V.S., was examined as an expert witness, and gave it as his opinion that the method of shipping employed was cruelty of a bad type. The witnesses for the defence deponed that it was not cruel to sling cattle by the horns; and further, that this method had been adopted at Stornoway and other west coast ports in the past. Several of the witnesses for the prosecution also stated that they had seen cattle shipped in this way before. The Sheriff, in respect that the dealers were excusable to a certain extent on the ground of custom, imposed a fine of 5s. each.—John Macintyre, master of the "Ardmaddy," was also charged with the same offence as the dealers, and further with carrying the cattle in the hold of his vessel from Stornoway to Kyle, the said hold not being fitted for carrying cattle, and overcrowded the hold, in consequence of which two of the animals died on the passage from suffocation and others were injured. He pled guilty to the first offence, for which he was fined 5s., and the second was established by evidence, and a fine of £7 imposed.—*N.B.A.*

The Seller's Right to Bid.

In the *Farmers' Legal Handbook*, by Isaac Connell, S.S.C. (p. 64), I read under "Auction Sales": "Under the Sale of Goods Act, 1883, a seller may now reserve a right to bid, either by himself or by another on his behalf." Does this refer to one reserve bid, or is it legal what used to be known as back bidding, wheeling, or white-bonneting, that is, a party employed by seller to raise the price of the article sold by bidding alongside others, and the article falling into his hands reverts back to the seller, he having no use for it?—PERPLEXED.

[Mr. Connell's statement is quite correct. You will find the matter more fully explained on page 177 of his *Handbook*. If a sale is announced as under condition that the seller reserves a right to bid, he can bid as often as he likes. On the other hand, however, section 58 (3) of the Act provides that "Where a sale by auction is not notified to be subject to a right to bid on behalf of the seller, it shall not be lawful for the seller to bid himself, or to employ any person to bid at such sale, or for the auctioneer knowingly to take any bid from the seller or any such person. Any sale contravening this rule may be treated as fraudulent by the buyer."—ED. *N.B.A.*]

Stable Noises.

One of the applicants to Mr. Fordham, at North London, was an elderly gentleman, who said he lived next to some stables, and the noise of the horses interfered with his sleep.

Mr. Fordham: What noise do they make?

The Applicant: Stamping and bumping about the whole night long.

Mr. Fordham consulted the law books, and said: It becomes a question as to whether the horse is a noisy animal within the meaning of the Act.

The Applicant: I am afraid the poor horses are not able to rest themselves.

Mr. Fordham: I cannot see that you have any remedy here. It is different to the barking of a dog or the crowing of a cock. They cannot be said to be necessary for business, but the horse is a necessary animal. Perhaps the owner of the animals may be able to remedy matters, but there is no law against the stamping of horses.

The Sanitary Institute.

At an examination for Inspectors of Meat and other foods, held in Bristol on October 16th and 17th, 1903, five candidates presented themselves, and Mr. Frank Farrell was awarded a certificate.

In parts of Australia, where the average rainfall is not more than 10 in., a square mile of land will support only eight or nine sheep. In Buenos Ayres, the same area, with 34 in. of rain, supports 2,560 sheep.

Personal.

The Senate of the University of Bombay have invited Dr. Fras. Evelyn Place, B.Sc., M.R.C.V.S., etc., to act as examiner in Agriculture and Veterinary Science for the current year. His services in this capacity last year resulted in an increased interest being taken in the Agriculture of the Presidency, and the Government are taking active steps to bring agricultural education into a line with that of the advanced States of America and Europe.

BLAND—WAKELIN. A large congregation assembled at St. Michael's Church, Coningsby, on Thursday morning, Oct. 8th, to witness the marriage of Mr. A. Whitsed Bland, M.R.C.V.S.. eldest son of the late Mr. F. Bland, M.R.C.V.S., of Wrangle, to Miss Margaret Wakelin, second surviving daughter of Mr. Jos. and Mrs. Wakelin, of Burgh-le-Marsh. Mr. Wm. Wakelin (uncle) gave away the bride, Miss Marie Wakelin, youngest sister of the bride, being bridesmade. Mr. Frank Bland, of Boston, cousin of the bridegroom, acted as best man. The service was fully choral, the choir (of which Mr. Bland is a member) attending. A reception was held after the ceremony at the Bull Hotel. The happy pair left Tattershall, en route for Yarmouth and Norwich, where the honeymoon is being spent. The presents were numerous and costly.

ARMY VETERINARY DEPARTMENT.

Extract from *London Gazette*,
WAR OFFICE, PALL MALL, Oct. 27.

The King has been pleased, by Royal Warrant dated Oct. 5, 1903, to approve of the alteration of the ranks of the Veterinary Officers of the Army serving on that date as follows:—

Vet.-Colonels to be Colonels.
Vet.-Lieut.-Colonels to be Lieut.-Colonels.
Vet.-Majors to be Majors.
Vet.-Captains to be Captains.
Vet.-Lieutenants to be Lieutenants.

The Colonel holding the appointment of Director-General to rank as Major-General.

OBITUARY.

JOHN SQUARE BRUNSKILL, M.R.C.V.S.,
Bishop's Stortford, Herts.
Graduated, Lond: July, 1878.

The deceased, who had been in bad health for six months, succumbed following an operation for cancer. He was widely known and esteemed. Besides being a man of knowledge in most subjects he was an adept at his profession. He was among the foremost of sportsmen in the district, followed the hounds, was a noted cricketer, was happy with a gun in his hand, and such sport as he did not participate in he watched with great interest. He was also a member of many local institutions, and manifested a warm interest in matters connected with the town in which he had resided some twenty years.

There was a large following at the funeral, among them being Mr. Guy Gilbey (representing Sir Walter Gilbey, Bart.), Mr. John Barker, J.P.; and members of other prominent families of the district. The floral tributes were numerous, and included beautiful wreaths and crosses from Sir Walter Gilbey, Bart.; Mr. and Mrs. Tresham Gilbey, Mr. and Mrs. Leonard Routledge, Mr. John Barker, Mr. and Mrs. Hine; from the Bishop's Stortford Cricket Club, and others.

CORRESPONDENCE.

BLANCHING OF THE HOOFS.

Sir,

I shall be much obliged if you or any of your readers can explain the cause or causes of a horse's feet which were originally black becoming gradually white.

I have in my care a pure desert-bred Arab horse, which in 1897 was shipped to India from Arabia for racing purposes, and afterwards (in 1901) brought to England. During the four years he was in India his fore feet were black and his hind feet were partly black and partly white, in keeping with the ermine markings of his hind coronets. Now, however, after 2¼ years in England the horn of the fore feet is gradually becoming white, and the hind feet have become quite white. The horse has good, sound, tough feet, and several blacksmiths say that they find the horn far harder than that of any English horse.

I know that damp grass and moist ground encourage the horn to grow quickly, in fact the difference between the wet climate of England compared with the drier climate of India necessitates this Arab's shoes being removed far oftener than was necessary (in a carefully managed stable) in India (Punjab). Can this more rapid growth of the foot be the cause of the hoof changing colour in this peculiar way?

Being very interested in horses in general, and Arabs in particular, I shall be grateful for any information on this subject.

"AMATEUR."

THE NEW A.V.D. WARRANT.

Sir,

Your correspondent "A.V.D. Retired," is expressing the opinion of many of us in calling attention to the debt of gratitude which we owe to the Editor of *The Veterinary Record*. This paper circulates so widely among the members of the profession that it has brought the case of the A.V.D. before people who were never before interested in it, and I cannot help thinking that the publication of the new Warrant with its many advantages will be the means of improving the position of the civilian members of the profession almost as much as those of the military branch.

The present is a most opportune time for forming the Army Veterinary Corps: many men who have profited by their experience during the South African war will consider whether it is not worth while to re-engage under the new conditions and it behoves those in authority not to lose the opportunity of securing some of these men as "original members."

The rumour that no veterinary hospitals will be started before April 1st, has, I hope, found origin in the brain of a pessimist rather than in the neighbourhood of Pall Mall, for such a long delay could hardly be recognised among practical people as a necessity, unless, of course, information on which to make a start has to be procured from India or South Africa! Delay now would be very detrimental to the cause, and I venture to hope you may be able to bring this to the notice of the "powers that be," and urge that all the provisions of the new Warrant be put in force within three months from the date of its publication, and so end the present anomalous position of the officer of the Army Veterinary Corps, whose corps is a *myth* and whose substantive rank entitles him to command *no one*.—Yours truly,

"ONLOOKER."

October 24.

Sir,

After weary months of waiting and occasional gleams of hope, the long-expected Warrant has, at last, made its appearance, and this was on the 9th inst. At first sight all looks very rosy. Our *confrères* in the Army are now

gentlemen (any way, by Act of Parliament) and not glorified farriers as heretofore—which is certainly a most desirable point gained. It will be well for intending candidates for commissions in the A.V.D. to examine well the conditions under which they will in future carry out their duties, and what are the financial prospects: ere they withdraw the boycott and make the contemplated rush to fill vacancies. After perusal of the new Warrant we referred to the Royal Warrant and Official Army List (in the latter, by the bye, the A.V.D. comes *last* on the list, after Inspectors of Army Schools, Yeomanry, Militia, and Volunteers, etc.), when the following interesting facts were disclosed. The pay of the Director-General is increased by £350 per annum, and pension by £100 per annum. That of the Deputy-Director-General is also increased by £160 per annum, as also his pension by £80 per annum. This is most satisfactory, considering the source from which this marvellous document—the New Warrent—emanated. To proceed: District Veterinary Officers are very much benefitted by the new conditions, both financially and possible term of service. Lieutenants appear to be the greatest gainers; they become eligible for promotion to Captain's rank after having completed five years commissioned service. Thus, a Lieutenant gets his Majority within 15 years. Now comes the rub. "Promotion to the rank of Lieut.-Colonel shall be made by selection from Majors of not less than 15 years service, who have served at least three years in India, and *have previously qualified in such a manner as may be prescribed by our Secretary of State* (italics are ours). Thus says the Warrant. There is clearly a grievance here, for it appears to be that in the A.V.D. it will be a case of "once a Major always a Major," for the chances of soaring above this exalted rank are remote indeed, unless we be engaged in bloody wars or doing our duty in deadly climates. Thus, further promotion becomes practically an impossibility. And why? The Director-General can remain in office until 1907, completing a total of 35 years service, 17 of which have been spent in administrative rank. The next senior officer can remain until 1910 completing a total of 40 years service: 13 of which have been administrative. The next on the list can continue until 1916 completing a total of 43 years service, 18 of which will be in the administrative grade. To review the whole list would be monotonous, but to conclude it will suffice to mention the last officer of the A.V.D. promoted to the rank of Lieut.-Colonel. He can continue to remain in the service until 1924, thus completing a total of 41 years service, 21 of which will be administrative. It will be clear to all, that the appointment of existing administrators in the A.V.D. is practically for ever (we are all, unfortunately, mortal). An administrative office is at present held by a "dug-out," who was retired on the age-limit so long ago as 1894!! Not only the unfortunate majors of the A.V.D. but the Captains and Lieutenants ultimately become victims of the new Warrant. Combined they should vent their wrath upon the heads of those wiseacres who inserted para. 586 of the new Warrant, which was originally intended for the betterment of the Department, more especially regarding promotion. Upon joining the A.V.D. a Lieutenant receives pay at the rate of £250 per annum (or 13/8 per diem), out of which he has to provide kit, etc. After five years service he becomes Captain on 15/6 per diem; then after a further five years service—provided that three have been spent abroad—he receives a further increase to 17/6 per diem. Having completed 10 years service in the rank of Captain—provided he has served three years abroad and "*has previously qualified in such a manner as may be prescribed by the Secretary of State*" (italics ours)—he attains the exalted rank of Major, with prospects practically *nil*, and pay £365 per annum, to say nothing about debts in various quarters.

How do these conditions compare with civil life? It would be a very poor practice indeed, town or country, which will not give a return of £300 or £400 per annum in return for one's labours! But then we must not forget there are the title and uniform—which are apparently looked upon as sufficient attraction for future candidates for the A.V.D.!!

The sole remedy available, to enable us to get over that stone wall which at present separates the lower and upper ranks of the A.V.D. so completely, would be the enforcement of the retirement clause in the Royal Warrant—Para. 587, which states "It shall be competent to our Secretary of State to place a veterinary officer on the retired list on completion of 10 years service (see article 432) *or after 30 years service* (italics ours). This would increase greatly the chances of promotion, and furthermore it would be most advantageous and desirable both to the State and for the efficiency of the A.V.D. If it be the intention of His Majestys's Government to secure the best men the profession produces, then the chances of success should be made at least equal to those encountered in civil life. It should be made possible for officers of the A.V.D. to reach the dizzy rank of Lieutenant-Colonel ere they are compelled by stress of age and infirmity to take to crutches or a bath-chair.

"TRUTH."

AN EXPLANATION.

Sir,

At a meeting of the Eastern Counties V.M.A. held at Great Yarmouth on September 24th, I took part in a discussion on "Glanders," which subject was introduced by Mr. W. Shipley, F.R.C.V.S.

The remarks I made are reproduced in this week's *The Veterinary Record* but not in their entirety. When mentioning an outbreak that occurred some three or four years ago in Pickford's stables here, in addition to what appears in print, I also stated that I was in no way professionally connected with this outbreak, but that my information was obtained from the veterinary surgeons so concerned.

Without this explanation the gentlemen who had to do with the case might rightly think that I had a great amount of presumption in mentioning a case with which I had no connection. The other cases I spoke about were in my own practice.—Yours faithfully,

J. R. GREEN, F.R.C.V.S.

Mansfield Road, Nottingham.
October 26th, 1903.

BRASS PLATES.

Sir,

The address of Mr. Astley Bloxam at the inauguration of the Royal Veterinary College was interesting indeed. One of his observations caused me to ponder. Speaking of the advancement of the profession Mr. Bloxam remarked that we were now entitled to consider ourselves professional men and put up a brass plate. Brass plate!

Well, a brass plate is not much in itself, but when it grows into a wooden erection—say 20ft. by 10ft.—with great blazing letters there is a considerable alteration. As my meaning by this time will be clearly understood it wo ld be useless to enlarge on the subject, suffice it to say that in all "professions," with ours as an exception, brass plates are the rule, and it is my opinion the time is now ripe for our Council to look into this matter.

The manner in which some of our members at present bespatter their premises with signboards etc. is a shocking disgrace and would not be tolerated by any other "profession."—Yours faithfully,

M.R.C.V.S.

AN APPEAL.

Dear Mr. Editor,

Some time ago a member of our profession—Mr. John Morton, who was in practice at Brighton—died somewhat suddenly of blood poisoning as the result of a cat bite, leaving a widow and four children without adequate means of support. An effort is now being made to get two of the children, aged respectively eight years and seven years, into orphan asylums, those selected being the London Orphan Asylum, Watford, and the Reedham Orphanage, Purley, Surrey. Amongst the many hundreds in the profession who read *The Record* there must be very many who are entitled to votes for these Institutions. Will they kindly lend a helping hand by sending me their voting papers? The votes of other institutions can be exchanged, and if such are sent to me I will arrange the exchange.

Believe me, yours faithfully,

JAMES F. SIMPSON.

Maidenhead, Oct. 27th, 1903.

COMMUNICATIONS, BOOKS AND PAPERS RECEIVED.—Messrs. E. White Wallis, C. A. Squair, G. Mayall, E. S. Atkinson, J. R. Green, A. M. Dickie, J. F. Simpson. Prof. de Ratz, Capt. F. S. H. Baldrey. F. E. P. "Onlooker."

Ceylon Administration Veterinary Report, Cape Agricultural Journal, Annual Report C.V.D. India, The Horncastle News.

Veterinary Societies—Addresses.

BORDER COUNTIES V.M.S.
Pres: Mr. J. W. Hewson, M.R.C.V.S., Wigton
Hon. Sec. (pro tem.): Mr. F. W. Garnett, M.R.C.V.S., Dalegarth, Windermere
Meetings, Second Friday of Feb., June, and October

CENTRAL V.M.S.
Pres. Mr. R. Porch, F.R.C.V.S., Farm Lane, Walham Green, S.W.
Hon. Sec.: Mr E. Lionel Stroud, F.R.C.V.S., 29 Spring-st., Hyde Park, W.
Meetings, First Thursday in each month, except August and September, 10 Red Lion Square. Holborn, at 7 p.m.

CENTRAL V.A. OF IRELAND.
Pres. Mr. M. J. Cleary, M.R.C.V.S., Kilpatrick, Mullingar
Hon. Sec: Mr J. J. Vahey, M.R.C.V.S., Ballinrobe
Treas: Mr. J. F. Healey, M.R.C.V.S., Midleton

EASTERN COUNTIES V.M.A.
Pres: Mr. Fred. Morton Wallis, M.R.C.V.S., Halstead, Essex
Hon. Sec.: Mr. H. P. Standley, M.R.C.V.S. Wymondham
Meetings, Second Tuesday, Feb. and July

GLASGOW V.M.S.
Pres. Principal McCall.
Hon. Sec. Mr. Walter Gardner

VET. MED. ASSN. OF IRELAND.
Pres: Mr. Chas. Allen, F.R.C.V.S., 35 North Frederick st., Dublin
Hon. Sec. Mr. J. McKenny, M.R.C.V.S. 116 Stephens-green-west, Dublin

LANCASHIRE V.M.A.
Pres: Mr. R. Hughes, F.R.C.V.S., Oswestry
Hon. Sec.: Mr. G. H. Locke, M.R.C.V.S. Grosvenor-street, Manchester
Meetings, 1st Thursday in April, June, Sept., & Dec.

LINCOLNSHIRE V.M.S.
Pres. Mr. H. Caulton Reeks, F.R.C.V.S., Spalding
Hon. Sec: Mr. T. Turner, M.R.C.V.S., Sleaford
Treas: Mr. E. C. Russell, M.R.C.V.S., Grantham
Meetings, Second Thursday, Feb., June and October

MIDLAND COUNTIES V.M.A.
Pres: Mr. Frank H. Gibbing, F.R.C.V.S., Nottingham
Hon. Sec: Mr. H. J. Dawes, F.R.C.V.S., Camden House, High-st., West Bromwich
Meetings, Second Tuesday, Wednesday, Thursday, and Friday alternately in Feb., May, Aug. and Nov.

NATIONAL VET. ASSOCIATION.
Pres: Mr. C. Allen, F.R.C.V.S., North Frederick-st., Dublin
Sec: Mr. William Hunting, F.R.C.V.S.
Treas: Mr. F. W. Wragg, F.R.C.V.S., Whitechapel, London.

NATIONAL VETERINARY BENEVOLENT & MUTUAL DEFENCE SOCIETY.
Pres: Mr. W. A. Taylor, F.R.C.V.S., Tower-st, Manchester
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Meetings, First Tuesday, March and September

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